

REMARKS

Claims 1-20 are pending in the present application. Claims 1-20 stand rejected. Claims 1, 5, 7 and 13 have been amended herein and new Claim 21 has been added herein. Reconsideration is respectfully requested in light of the present amendments and following remarks. The above amendments and following remarks are believed to be fully responsive to the outstanding Office Action and to render all claims at issue patentably distinct over the references cited.

The Examiner is thanked for the courtesies extended to Applicants' representative during a personal interview held on November 16, 2004. Proposed claims were discussed in light of the cited references. The Audi Declaration and Edison Agreement were discussed. Agreement was not reached but the Examiner indicated that a declaration of commercial success or the like may be favorably considered.

The disclosure has been objected to due to alleged informalities. This objection is respectfully traversed. Notwithstanding, the cross reference section has been revised. Accordingly, it is respectfully requested that the instant objection be withdrawn.

The Abstract of the disclosure has been objected to. This objection is respectfully traversed. Notwithstanding, the Abstract has been revised without adding any new subject matter. Accordingly, it is respectfully requested that the instant objection be withdrawn.

Claim 5 stands rejected under 35 U.S.C. §112, second paragraph. This rejection is respectfully traversed. Notwithstanding, the noted item has been revised without adding any new subject matter. Accordingly, it is respectfully requested that the instant rejection be withdrawn.

Claims 1-20 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over the Edwards article in view of Speller, Jr. et al. ('115). This rejection is respectfully traversed. It is believed that the originally filed claims are patentably distinct over the cited references.

In contrast, there is no suggestion or motivation to combine the cited references, especially since the Edwards article only discloses use of a conventional hydraulic actuator (see page 25 of Edwards). Furthermore, filed herewith is a redacted SPR Setting Machine Usage Agreement between Emhart Technologies, Inc. (an affiliate of the assignee of the present application) and the Edison Welding Institute. The present application, among others, is one of the Licensed Patents therein (see Section 1.3), and Edison "agrees that the product covered by all of the claims of the Licensed Patents has exhibited commercial success, is valuable and is a significant improvement in the industry" (see Section 3.2). The redacted portions of this Agreement were generally discussed with the Examiner during the interview. This Agreement constitutes significant evidence of secondary considerations in favor of non-obviousness of the presently claimed invention. A 2005 Declaration from Ralf England and a Declaration from Audi are filed herewith. These Declarations provide further significant evidence of nonobviousness through commercial success.

More specifically, amended independent Claims 1, 7 and 13 recite the use of a self-piercing rivet and an electric motor. Furthermore, independent Claims 1 and 7 have been amended to state that electric motor, and not fluid, actuation is used to advance the self-piercing rivet. Improper hindsight reasoning and radical reengineering would be required to combine the hydraulic actuator of Edwards (see page 25) with the very complicated pre-drilling machine of Speller, Jr. et al. U.S. Patent Application Publication No. 2002/0166221 (Clew), which is not prior art to the present application, demonstrates that one skilled in the art, even after having the benefit of hindsight reasoning, would not combine a fluid activated riveting machine (such as a hydraulic one) with the servo-controls optimally required to effectively control an electric motor actuated self-piercing riveting machine, such as that claimed in the present application. In fact, Clew teaches away from such a combination at paragraphs [0004] and [0005] thereof.

In contrast to the Examiner's assertions, there is no suggestion or motivation to combine the electrically driven machine of Speller, Jr. et al. ('115) with the hydraulically actuated machine of the Edwards reference. To the contrary, the third party, Audi employee declaration of Konig states, in paragraph 6, that the electric motor driven, rotary-to-linear transmission, with sensor control "technology here employed is not to our knowledge usable for other, e.g., hydraulic, systems." (emphasis added). This is the statement from a third party customer, Audi, who was comparing a hydraulically driven self piercing riveting machine to the Emhart Tucker riveting machine disclosed and claimed in the present application.

Moreover, Speller, Jr. et al. ('115), at column 1, lines 20-27, and in column 2, lines 11-18, teaches away from and discourages the use of hydraulics for riveting machines. See generally, *Winner Int'l Royalty Corp. v. Wang*, 53 U.S.P.Q.2d 1580, 1588 (Fed. Cir. 2000), *cert. denied*, 530 U.S. 1238 (2000) (if a reference teaches away then that fact alone can defeat obviousness). Significant reengineering would be required to combine these two cited devices if that is even possible; it would clearly not be desirable given the background of the Speller, Jr. et al. ('115) patent and statement of the Audi employee. This is even more significant given that the Speller, Jr. et al. ('115) patent is primarily intended for use to upset a two sided rivet adjacent the anvil 50 and not actually to receive and drive the rivet itself into a workpiece (see column 4, lines 4-8 of the '115 patent).

Moreover step (i) of independent Claim 13 has been amended to state "always keeping the rivet punch and die coaxially aligned during use of the riveting tool." Support for this amendment can be found in at least originally filed Figures 1-3, 9, 12a-12f and 13a-13c, and in text paragraphs numbers [0029] and [0053] -[0055]. In contrast, Speller, Jr. et al. teaches that "a single actuator 80 can thus be provided for operation of all the tools 180, 182, 184, 186, and 188" such that a punch and die are not always aligned. See column 7, lines 23-25, and Figure 9 of Speller, Jr. et al. Radical reengineering would be required to combine the punch-to-die relationship of Edwards with the multi-tool system of Speller, Jr. et al., given the improper benefit of hindsight reasoning using the

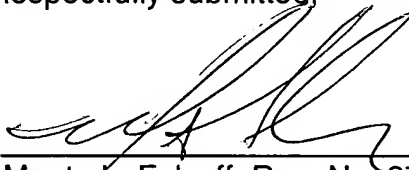
presently claimed invention as a template. Accordingly, it is respectfully requested that the instant rejection be withdrawn.

Finally, it is respectfully requested that the 1449 Form filed on August 26, 2004, be initialed by the Examiner and mailed to Applicants' representative as such has not been received.

In view of the instant amendments, it is submitted that the present application is in condition for allowance. Accordingly, it is requested that the Examiner pass the case to issue at his earliest convenience.

Respectfully submitted,

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